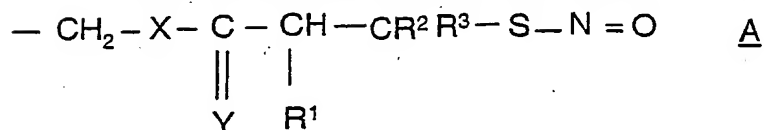


## CLAIMS

1- Polymer bearing at least one function of the formula A:



5 in which:

X represents O, S or NT, in which T represents H or a saturated aliphatic hydrocarbon-based group; Y represents O or S;

R<sup>1</sup> represents H; a saturated aliphatic hydrocarbon-based group, which is optionally substituted and/or optionally interrupted by one or more O or S atoms; a group —(O)<sub>p</sub>—Ar, in which p represents the integer 0 or 1 and Ar represents an optionally substituted saturated and/or aromatic carbocyclic group or an optionally substituted saturated and/or aromatic heterocyclic group; a group Hyd—CO—O— or Hyd—CO—NH—, in which Hyd represents an optionally substituted saturated aliphatic hydrocarbon-based group; an optionally substituted aromatic group; or an optionally substituted aromatic heterocyclic group; R<sup>2</sup> and R<sup>3</sup> represent, independently of each other, a hydrogen atom; an optionally substituted saturated aliphatic hydrocarbon-based group; a saturated and/or aromatic carbocyclic group.

20 2 - Polymer according to Claim 1, of styrene or polyethylene glycol type.

3 - Polymer according to either of Claims 1 and 2, characterised in that X represents N.

25 4 - Polymer according to any one of the preceding claims, characterised in that R<sup>2</sup> and R<sup>3</sup> independently represent H, (C<sub>1</sub>–C<sub>8</sub>)alkyl; (C<sub>6</sub>–C<sub>10</sub>)aryl; and R<sup>1</sup> represents H; (C<sub>1</sub>–C<sub>8</sub>)alkyl; (C<sub>6</sub>–C<sub>10</sub>)aryl; (C<sub>6</sub>–C<sub>10</sub>)aryloxy; heteroaryl which comprises one or more hetero atoms chosen from O, S and N and consists of one or more 5- to 8-membered monocycles; heteroaryloxy, in which heteroaryl is as defined above; (C<sub>1</sub>–C<sub>8</sub>)alkylcarbonyloxy; (C<sub>1</sub>–C<sub>8</sub>)alkylcarbonylamino; (C<sub>6</sub>–C<sub>10</sub>)–

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arylcarbonyloxy; (C<sub>6</sub>-C<sub>10</sub>)arylcarbonylamino; heteroarylcarbonyloxy; or hetero-arylcarbonyl-amino, in which heteroaryl is as defined above.

5- Polymer according to Claim 4, characterised in that R<sup>2</sup> and R<sup>3</sup>  
5 independently represent (C<sub>1</sub>-C<sub>4</sub>)alkyl; and R<sup>1</sup> represents (C<sub>1</sub>-C<sub>4</sub>)alkyl-carbonylamino.

6- Polymer according to any one of the preceding claims, characterised in that the function A is:

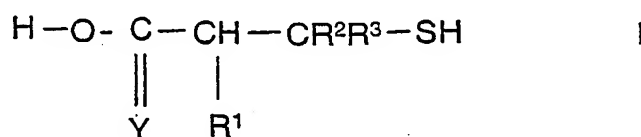
10 -CH<sub>2</sub>-O-CO-CH(NH-W)-C(CH<sub>3</sub>)<sub>2</sub>-S-N=O A1  
in which W represents alkanoyl (i.e. alkylcarbonyl), such as acetyl.

7- Polymer according to Claim 6, characterised in that it is of polystyrene or polyethylene glycol type.

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8- Process for the preparation of a polymer according to any one of the preceding claims, characterised in that it comprises the steps consisting in:

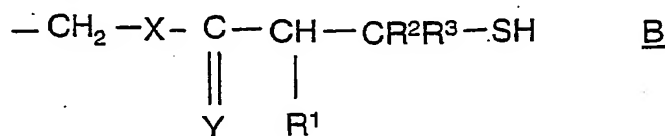
a) reacting a precursor polymer P bearing at least one -CH<sub>2</sub>-XH function with the required amount of a reagent of the formula I:



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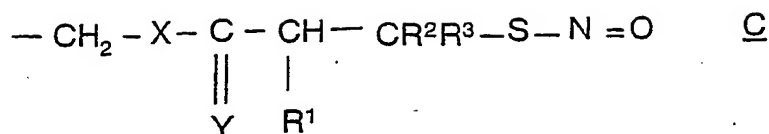
in which the HO-C(=Y)- function is optionally in activated form and Y, R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are as defined in Claim 1, such that each -CH<sub>2</sub>-XH function of the polymer P reacts with a molecule of the reagent of the formula I, and then

b) treating the resulting polymer bearing at least one function B:



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with a nitrosating agent, so as to convert each of the functions B into functions C:



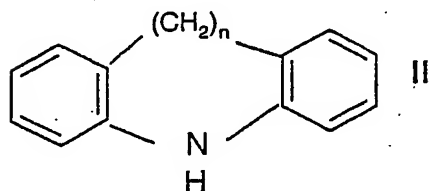
9- Process according to Claim 8, characterised in that the nitrosating agent is chosen from an alkali metal nitrite; an alkyl nitrite; or  $\text{NO}^+\text{BF}_4^-$ .

10- Process for nitrosating secondary amines, which consists in reacting a secondary amine with a polymer according to any one of Claims 1 to 7, so as to obtain the corresponding nitroso derivative.

11- Process according to Claim 10, characterised in that the molar ratio of the functions of the formula A of the polymer to the secondary amine functions ranges between 2 and 10 and preferably between 2 and 5.

12- Process according to either of Claims 10 and 11, characterised in that it is performed at a temperature of between 15 and 35°C.

13- Process according to any one of Claims 10 to 12, characterised in that the secondary amine is chosen from diphenylamines optionally substituted by one or more substituents of alkyl, alkoxy, cyano or hydroxyl type; an amine of the formula:



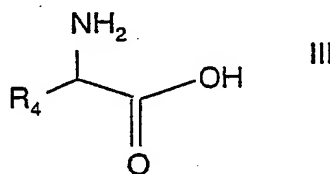
in which n is an integer equal to 0, 1, 2 or 3 and the phenyl nuclei are optionally independently substituted by one or more substituents chosen from alkyl, cyano, alkoxy and hydroxyl; a phenylalkylamine optionally substituted by one or more substituents chosen from alkyl, cyano, alkoxy and hydroxyl; a benzopyrrolidine or a benzopiperidine optionally substituted by one or more substituents chosen from hydroxyl, alkyl, cyano and alkoxy; a benzylpyrrolidine optionally substituted by one or more substituents chosen from hydroxyl, cyano, alkyl and alkoxy; or a

benzylpiperidine optionally substituted by one or more substituents chosen from alkyl, cyano, alkoxy and hydroxyl.

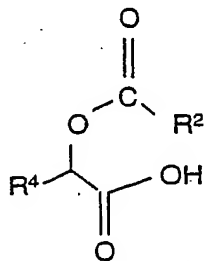
14- Process for diazotising primary amines, which consists in reacting a primary amine with a polymer according to any one of Claims 1 to 7, so as to obtain the corresponding diazonium derivative.

15- Process according to Claim 14, characterised in that the amine is an aromatic amine optionally substituted by one or more substituents chosen from hydroxyl, cyano, alkoxy and alkyl.

16- Process for acetoxyating an amine of the formula III:



in which  $\text{R}^4$  represents any organic group attached to the rest of the molecule III (-CH(NH<sub>2</sub>)-COOH) via a carbon atom, which consists in reacting the amine of the formula III with an acid of the formula  $\text{R}^2\text{-COOH}$  optionally in salified form, in which  $\text{R}^2$  represents any organic group attached to the carboxylic function via a carbon atom, in the presence of a polymer according to any one of Claims 1 to 7, so as to obtain the corresponding compound of the formula:



in which  $\text{R}^2$  and  $\text{R}^4$  are as defined above.

17- Process according to Claim 16, characterised in that  $\text{R}^4$  represents phenyl or benzyl optionally substituted by one or more alkoxy, hydroxyl, cyano or alkyl.